IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Appellant:	Muntz	Examiner:	Fleuarntin
Serial No.:	09/836,828	Group Art Unit:	2172
Filed:	April 17, 2001	Docket No.:	10008127-1 (HPCO.035PA)

Title: LEASE ENFORCEMENT IN A DISTRIBUTED FILE SYSTEM

CERTIFICATE UNDER 37 CFR 1.8: The undersigned hereby certifies that this correspondence and the papers, as described hereinabove, are being deposited in the United States Postal Service **in triplicate**, as first class mail, in an envelope addressed to: Mail Stop Appeal Brief – Patents, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on May 17, 2004.

By: Rennae Johnson

APPEAL BRIEF

Mail Stop Appeal Brief - Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

This is an Appeal Brief submitted pursuant to 37 C.F.R. § 1.192 for the above-referenced patent application and is being filed in triplicate.

I. Real Party in Interest

The real party in interest is Hewlett-Packard Company having a place of business at 1501 Page Mill Road, Palo Alto, CA. The above referenced patent application is assigned to Hewlett-Packard Company.

II. Related Appeals and Interferences

Appellant is unaware of any related appeals or interferences.

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III. Status of Claims

Claims 1-15 are presented for appeal.

Claims 1-15 stand rejected under 35 USC §102(e) as being anticipated by US patent number 6,263,350 to Wollrath et al. ("Wollrath").

The claims presented for appeal, as presently amended, may be found in the attached Appendix of Appealed Claims.

IV. Status of Amendments

The application was initially filed on April 17, 2001 and included claims 1-15. In reply to a first Office Action, which was mailed on May 21, 2003, a Response was filed on August 15, 2003. No claims were amended, and the response traversed the rejection under §102(e). A final Office Action was mailed on January 19, 2004, a response after final rejection was filed on February 6, 2004, and no claims were amended. An Advisory Action was issued on February 24, 2004, and a Notice of Appeal was filed on April 14, 2004.

V. Summary of Invention

One embodiment of Appellant's invention is directed to a method for managing access to objects by clients in a distributed file system including a storage server arrangement (FIG. 1, #116; p. 5, ll. 15-27) and a meta-data server (FIG. 1, #108; p. 4, ll. 21-31). The method includes managing leases on the objects at the meta-data server (FIG. 2; FIG. 4; p. 4, ll. 21-31; p. 7, l. 21 – p. 8, l. 6). Lease expiration data indicates a lease expiration time and is transmitted from the clients to the storage server arrangement along with storage access requests (FIG. 3, #306; p. 7, ll. 11-16). At the storage server arrangement the lease expiration data is compared to data indicating a current time (FIG. 5, #404; p. 8, ll. 7-14). If the lease expiration time is earlier than a current time, access to the object is denied (FIG. 5, #410; p. 8, ll. 15-16).

VI. Issue for Review

Is the § 102(e) rejection of claims 1-15 proper when the asserted *Wollrath* reference fails to teach or suggest every limitation of the claims?

VII. Grouping of Claims

For purposes of this appeal, claims 1, 6, 11, and 12 are in group I, claims 2, 7, and 13 are in group II, claims 3, 4, 8, 9, and 14 are in group III, and claims 5, 10, and 15 are in group IV. The claims of the different groups do not stand or fall together.

VIII. Argument

The §102(e) rejection of claims 1-15 is improper because the asserted *Wollrath* reference fails to teach or suggest every limitation of the claims.

To establish that claims are anticipated, the prior art must show that every limitation in the claims is taught by the cited reference. The *Wollrath* reference does not teach all the limitations, and therefore, the Office Actions have not established that the claims are anticipated.

Claim 1 of group I includes limitations of managing access to objects by clients in a distributed file system, where a meta-data server manages leases to the objects. Even though it is the meta-data server that manages leases, the clients transmit the lease expiration times along with storage access requests to the storage server. From the lease expiration time transmitted by a client, the storage server determines whether a lease is expired and denies access if so. This permits the storage server to quickly determine whether to grant access without incurring the extra overhead of managing leases since lease management is performed by the meta-data server. In addition, the storage server need not consult the meta-data server because a client transmits the lease expiration time along with a storage access request.

The cited *Wollrath* reference does not teach that a client transmits the lease expiration times along with storage access requests to the storage server. Furthermore, *Wollrath's* client would have no need to transmit a lease expiration time along with a

storage request because *Wollrath's* MI component manages leases, the MI component is hosted by the server of the leased resource, and *Wollrath's* server thereby knows the lease expiration time without having to be informed by the client (col. 6, ll. 17-27; col. 7, ll. 29-47; FIG. 5; FIG. 6; col. 11, ll. 27-47; col. 12, ll. 38-64). These sections clearly demonstrate that *Wollrath* teaches that a client may request a lease period for an object, and the server responds with a grant period. *Wollrath's* server monitors the grant periods (col. 11, ll. 40-47). The Office Actions have not cited any teaching, nor does it appear, that *Wollrath* teaches a client sending a lease expiration time, and the server using that time sent by the client to determine whether a lease has expired. Therefore, the Office Actions have failed to show that claim 1 is anticipated by *Wollrath.*

Claims 6, 11, and 12 are method, apparatus, and system claims. To the extent that the limitations of claim 1 are similar to those in these claims, the Office Actions have not shown these claims to be anticipated by *Wollrath* for at least the reasons set forth above.

Claim 2 includes limitations of transmitting lease requests from the clients to the meta-data server, each lease request including an object identifier and a requested lease duration. It is respectfully submitted that the Office Actions have failed to show that *Wollrath* teaches both a storage server and a meta-data server and the operations related to these components. Specifically, the Office Actions cite *Wollrath's* col. 19, ll. 50-54 as teaching these limitations. However, this section appears to simply identify a client and a server, and there is no apparent suggestion of a meta-data server being involved in the process. Therefore, the Office Actions have failed to show that claim 2 is anticipated by *Wollrath.*

To the extend that claims 7 and 13 include limitations similar to those in claim 2, the Office Actions have failed to establish that these claims are anticipated by *Wollrath.*

Claim 3 includes limitations of, for each lease granted, returning data to a requesting client indicating a time at which the lease began and a duration of the lease. The Office Actions cite *Wollrath's* col. 13, ll. 26-28 as teaching these limitations. However, this section of *Wollrath* teaches that the server returns to the client *methods* for determining the duration of the lease. One method provides the client with the

length of the granted lease. Therefore, it can be clearly seen that *Wollrath* returns methods, not the data indicating the times. Furthermore, *Wollrath* does not teach anything of returning the time at which the lease began. Therefore, the Office Actions have failed to show that claim 3 is anticipated by *Wollrath*.

To the extend that claims 8 and 14 include limitations similar to those in claim 3, the Office Actions have failed to establish that these claims are anticipated by *Wollrath*.

Claim 4 depends from claim 3, and claim 9 depends from claim 8. The Office Actions have not shown that *Wollrath* anticipates for at least the reasons set forth above for claims 3 and 8.

Claim 5 includes limitations of computing lease expiration times at the meta-data server, and transmitting data indicating the lease expiration times from the meta-data server to the clients. As explained above in regards to claim 2, *Wollrath* does not teach use of a meta-data server. Furthermore, the cited col. 15, ll. 4-11 of *Wollrath* further emphasizes the operations of a client and a server with no mention of the operations of a meta-data server. Therefore, the Office Actions have failed to show that claim 5 is anticipated by *Wollrath*.

To the extend that claims 10 and 15 include limitations similar to those in claim 5, the Office Actions have failed to establish that these claims are anticipated by *Wollrath*.

The claims in group II are separately patentable over the claims in the other groups. The claims in group II include limitations that relate to transmitting lease requests from the clients to the meta-data server, each lease request including an object identifier and a requested lease duration. These limitations are not an obvious extension of the claims of group I, nor are these limitations necessarily found in the claims in the other groups (except by dependency). Therefore, the claims in groups II are separately patentable over the claims in the other groups.

The claims in group III are separately patentable over the claims in the other groups. The claims in group III include limitations that relate to returning data to a requesting client indicating a time at which the lease began and a duration of the lease. These limitations are not an obvious extension of the claims of either of groups I or II ,

nor are these limitations necessarily found in the claims in the other groups (except by dependency). Therefore, the claims in groups III are separately patentable over the claims in the other groups.

The claims in group IV are separately patentable over the claims in the other groups. The claims in group IV include limitations that relate to computing lease expiration times at the meta-data server, and transmitting data indicating the lease expiration times from the meta-data server to the clients. These limitations are not an obvious extension of the claims of any of groups I, II , or III, nor are these limitations necessarily found in the claims in the other groups. Therefore, the claims in groups IV are separately patentable over the claims in the other groups.

IX. Conclusion

In view of the above, Appellant believes the claimed invention to be patentable. The Office Action makes incomplete and erroneous findings of fact in the various combinations of references and fails to satisfy the requirements for establishing a *prima facie* case of anticipation. These mistakes are the basis of erroneous conclusions of law pertaining to non-allowability of the claims.

Claims 1-15 remain for consideration. Appellant respectfully requests reversal of the rejections as applied to the appealed claims and allowance of the entire application.

Respectfully submitted,

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APPENDIX OF APPEALED CLAIMS (09/836,828)

1. A computer-implemented method for managing access to objects by clients in a distributed file system including a storage server arrangement and a meta-data server, comprising:

managing leases on the objects at the meta-data server;

transmitting lease expiration data from the clients to the storage server arrangement along with storage access requests, the lease expiration data indicating a lease expiration time;

comparing at the storage server arrangement the lease expiration data to data indicating a current time; and

denying access to the object if the lease expiration time is earlier than a current time.

2. The method of claim 1, further comprising transmitting lease requests from the clients to the meta-data server, each lease request including an object identifier and a requested lease duration.

3. The method of claim 2, further comprising for each lease granted, returning data to a requesting client indicating a time at which the lease began and a duration of the lease.

4. The method of claim 3, further comprising computing lease expiration times at the clients in response to leases granted, wherein the lease expiration data specify the lease expiration times.

5. The method of claim 1, further comprising computing lease expiration times at the meta-data server, and transmitting data indicating the lease expiration times from the meta-data server to the clients.

6. A computer-implemented method for managing access to file data in a distributed file system including a storage server arrangement, a meta-data server, and a plurality of clients comprising:

submitting a lease request from a client to the meta-data server, the lease request referencing an object in the distributed file system;

when the object becomes available for lease, designating the object as leased to the client and transmitting a lease response to the client, the lease response including data that indicate a lease expiration time;

transmitting a storage access request referencing the object from the client to the storage server arrangement, the storage access request including data that indicate the lease expiration time; and

denying access to the object if the lease expiration time is earlier than a current time.

7. The method of claim 6, wherein the lease request includes an object identifier and a requested lease duration.

8. The method of claim 7, wherein the data indicating the lease expiration time describes a time at which the lease began and a duration of the lease.

9. The method of claim 8, further comprising computing the lease expiration time at the client from the lease response.

10. The method of claim 6, further comprising computing the lease expiration time at the meta-data server.

11. An apparatus for managing access to objects by clients in a distributed file system including a storage server arrangement and a meta-data server, comprising:

means for managing leases on the objects;

means for communicating lease expiration data from the clients to the storage server arrangement along with storage access requests, the lease expiration data indicating a lease expiration time; and

means for conditionally providing access to the object at the storage server arrangement if the lease expiration time is later than a current time.

12. A system for managing access to objects by clients in a distributed file system, comprising:

a meta-data server coupled to the clients, the meta-data server configured and arranged to manage leases to the objects responsive to requests from the clients, and transmit lease expiration data to the clients indicating lease expiration times; and

a storage server arrangement coupled to the clients, the storage server arrangement configured and arranged to conditionally provide access to the objects in response to access requests from the clients that include data indicating lease expiration times, wherein access is provided in response to a request if the lease expiration time is earlier than a current time.

13. The system of claim 12, wherein the lease request includes an object identifier and a requested lease duration.

14. The system of claim 13, wherein the data indicating the lease expiration time describes a time at which the lease began and a duration of the lease.

15. The system of claim 14, wherein the meta-data server is further configured to compute lease expiration times.